Private Perspectives and Cancellation

Daniel Chen Rajiv Sethi Alex Tordjman

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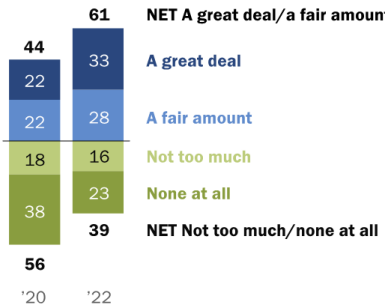
61% of Americans say they have heard at least a fair amount about the phrase ‘cancel culture,’ up from 44% in 2020

% of U.S. adults who say they have heard ___ about the phrase ‘cancel culture’



Note: Figures may not add up to NET values due to rounding. Those who did not give an answer are not shown.
Source: Survey of U.S. adults conducted April 25-May 1, 2022.

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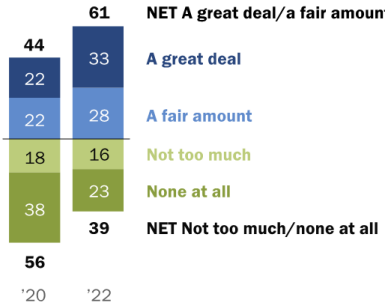

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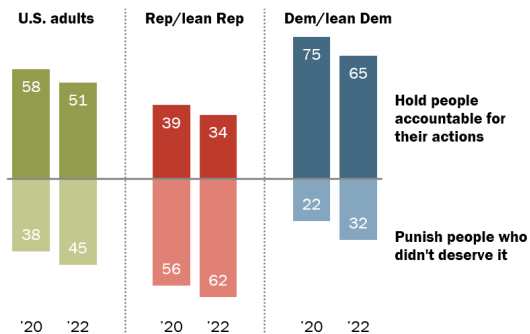
Americans now more divided on whether calling out others on social media for posting potentially offensive content is accountability or punishment

% of U.S. adults who say in general, when people publicly call out others on social media for posting content that might be considered offensive, they are more likely to ...



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Loury (1994)

Also: Noelle-Neumann (1974), Kuran (1984), Kahan (2017)

Overview

Perspectives-Expertise-Opinion framework adapted from Sethi and Yildiz (2012, 2016, 2026)

- Population with heterogeneous, unobserved priors (perspectives) about a state
- People receive private informative signals with varying precision (expertise)
- Posteriors (opinions) are observed, people make inferences about perspectives
- Entire array of opinions matters for inference about each perspective

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Cancellation

- Cancellation based on perceived distance between perspectives
- Better informed individuals reveal less but learn more
- Perspectives and expertise interact to determine social networks
- Moderates with high expertise and extremists with low expertise cancel most

Perspectives, Expertise, and Opinions

Population of n individuals with heterogeneous prior beliefs (perspectives) about a state θ

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where ε_i is normal with mean zero and known precision (expertise) p_i, leading to posterior

$$\theta \sim_i \mathcal{N}\left(y_i, \frac{1}{1+p_i}\right)$$

with mean (opinion)

$$y_i = \frac{1}{1+p_i}\mu_i + \frac{p_i}{1+p_i}x_i$$

Reasoning about Perspectives

Perspectives commonly known to be independently drawn from normal distribution

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Uninformed targets reveal perspectives; perfectly informed targets reveal signal

Reasoning about Perspectives

Let $\boldsymbol{\mu}_{-i}$ and $\boldsymbol{y}_{-i}$ denote perspectives and opinions of those other than i

Posterior belief of i regarding $\boldsymbol{\mu}_{-i}$ conditional on observing $\boldsymbol{y}_{-i}$ is multivariate normal:

$$\boldsymbol{\mu}_{-i} \mid x_i, \boldsymbol{y}_{-i} \sim_i \mathcal{N}(\boldsymbol{m}_i, \boldsymbol{\Sigma}_i).$$

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For any pair i and j, marginal distributions

$$\mu_j \mid x_i, \boldsymbol{y}_{-i} \sim_i \mathcal{N}(m_{i,j}, v_{i,j}),$$

where mean $m_{i,j}$ and variance $v_{i,j}$ affect cancellation by i, given μ_i

What can we say about $m_{i,j}$ and $v_{i,j}$ in relation to primitives?

Some Notation

When i observes y_j, the surprise or demeaned opinion is

$$\tilde{y}_{i,j} := y_j - \mathbb{E}_i[y_j|x_i] = y_j - \frac{p_j}{1+p_j} y_i$$

Positive surprise admits two explanations: high perspective or high signal

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$$T(\boldsymbol{p}_{-i}) \;=\; \sum_{k \neq i} p_k \, \tilde{y}_{i,k}$$

and

$$S(p_i, \boldsymbol{p}_{-i}) = 1 + p_i + \sum_{k \neq i} \frac{p_k^2}{1+p_k}$$

which is i's posterior precision about state after observing x_i and array of opinions

Marginal Distributions

For any pair i, j

$$\mu_j \mid x_i, \boldsymbol{y}_{-\boldsymbol{i}} \sim_i \mathcal{N}(m_{i,j}, v_{i,j}),$$

where

$$m_{i,j} = \tilde{y}_{i,j} - \frac{p_j \, T(\boldsymbol{p}_{-\boldsymbol{i}})}{S(p_i, \boldsymbol{p}_{-\boldsymbol{i}}) \, (1 + p_j)}$$

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and

$$v_{i,j} = \frac{p_j \big(S(p_i, \boldsymbol{p}_{-\boldsymbol{i}})(1 + p_j) + p_j \big)}{S(p_i, \boldsymbol{p}_{-\boldsymbol{i}}) \, (1 + p_j)^2},$$

Two Approaches to Cancellation

The perceived perspective gap between i and j, from i's perspective, is

$$d_{i,j} = |\mathbb{E}_i(\mu_j) - \mu_i| = |m_{i,j} - \mu_i|$$

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Given $\overline{d} \in \mathbb{R}_+$, the $\overline{d}$-adjusted likelihood of social proximity $\lambda_{i,j}^{\overline{d}}$ (as perceived by i) is

$$\lambda_{i,j}^{\overline{d}} = \mathbb{P}_i(|\mu_j - \mu_i| \leq \overline{d} \,|\, x_i, \boldsymbol{y}_{-i})$$

Probability $\lambda_{j,i}^{\overline{d}}$ analogously defined as $\overline{d}$-adjusted likelihood of social proximity perceived by j

Disagreement about Social Proximity

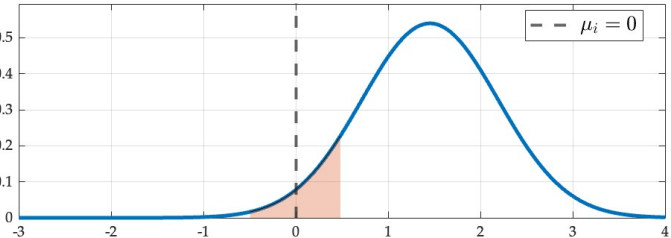
Individuals disagree about social proximity and hence desire to cancel

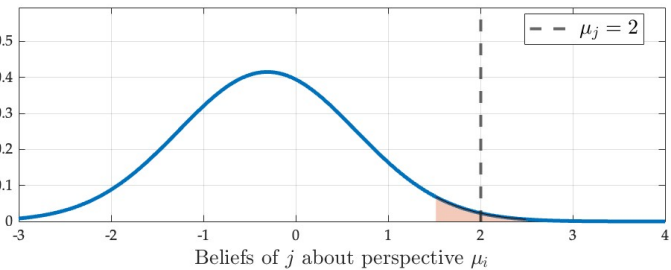
Example

Suppose that $n = 2$, $(\mu_i, \mu_j) = (0, 2)$, $(p_i, p_j) = (4, 1)$, $(x_i, x_j) = (1, 2)$, and $\overline{d} = 0.5$. Then

$$\mu_j \sim_i \mathcal{N}(1.45, 0.74) \qquad \text{and} \qquad \mu_i \sim_j \mathcal{N}(-0.31, 0.96).$$

The perceived perspective gaps are $d_{i,j} = 1.45$ and $d_{j,i} = 2.31$ respectively, while the perceived likelihoods of social proximity are $\lambda^{\overline{d}}_{i,j} = 0.094$ and $\lambda^{\overline{d}}_{j,i} = 0.028$.


$\mu_i = 0$
0.5
0.4
0.3
0.2
0.1
0
-3
-2
-1
0
1
2
3
4
Beliefs of i about perspective μ_j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Beliefs of j about perspective μ_i

Effects of Target Expertise

Proposition

Fix $p_i > 0$ and hold y_i, y_j constant

(i) *As $p_j \to \infty$, $m_{i,j} \to 0$ and $v_{i,j} \to 1$ (belief collapses to prior)*

(ii) *As $p_j \to 0$, $m_{i,j} \to y_j$ and $v_{i,j} \to 0$ (observer learns perspective)*

(iii) *The posterior variance $v_{i,j}$ is strictly increasing in p_j (effect is monotonic)*

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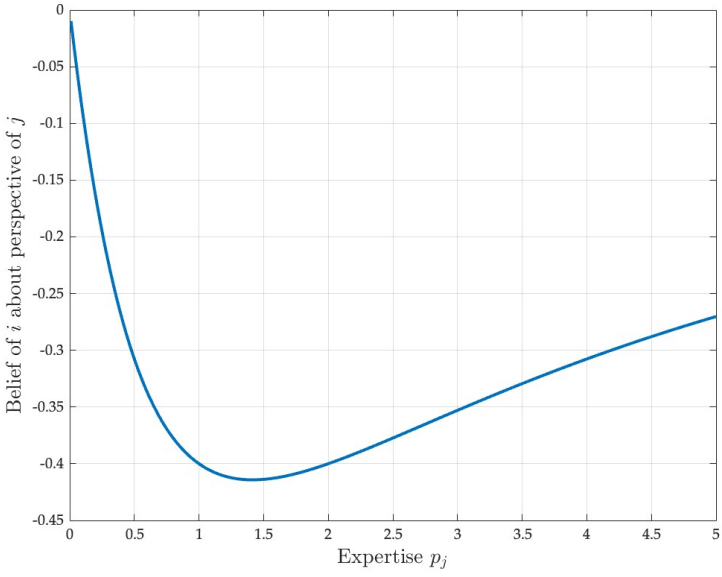
Example

Suppose $p_i = y_i = 1$ and $y_j = 0$. Then $m_{i,j}$ has a minimum of $1 - \sqrt{2}$ at $p_j = \sqrt{2}$.


0
-0.05
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-0.25
-0.3
-0.35
-0.4
-0.45
Belief of i about perspective of j
0
0.5
1
1.5
2
2.5
3
3.5
4
4.5
5
Expertise p_j

Effects of Observer Expertise

Proposition

Fix $p_j > 0$ and hold y_i, y_j constant

(i) *The posterior variance $v_{i,j}$ is strictly decreasing in p_i (expert observers learn more)*

(ii) *$m_{i,j}$ is increasing (decreasing) in p_i if and only if $T(\boldsymbol{p}_{-i})$ is positive (negative)*

(iii) *As $p_i \to \infty$, $m_{i,j} \to \tilde{y}_{i,j}$ and $v_{i,j} \to p_j/1 + p_j$ (learning is limited)*

The Two Person Case

When $n = 2$ target opinion surprise has the same sign as aggregate opinion surprise

Proposition

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Except in knife-edge case there is an interval $M = [\underline{m}, \overline{m}]$ such that $\underline{m} > 0$ and

$$|m_{ij}| \in M$$

for all $p_i > 0$

$|m_{ij}|$ is strictly increasing in p_i (better informed observers consider targets more extreme)

Directional Similarity and Moderation

If μ_i and m_{ij} have the same sign, perspectives are directionally similar (as perceived by i).

Otherwise directionally dissimilar

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If perspectives are directionally similar:

- i is more moderate than j if $|\mu_i| < \underline{m}$
- i is more extreme than j if $|\mu_i| > \overline{m}$

If directionally similar and neither moderate nor extreme, $|\mu_i| \in M$, there exists p_i with $\delta_{ij} = 0$

Proposition

If i and j are directionally dissimilar (as perceived by i) or if i is more moderate than j, the perceived perspective gap δ_{ij} is increasing in p_i. If i is more extreme than j, the perceived perspective gap δ_{ij} is decreasing in p_i.

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Proposition

If i and j are directionally dissimilar (as perceived by i) or if i is more moderate than j, the likelihood of perspective proximity λ_{ij} is decreasing in p_i for any threshold $\overline{\lambda}$.

Moderates more likely to cancel if expertise is high; extremists if expertise is low

Next Steps

- Moderation, expertise and network connectedness
- The value of ignorance (compatibility transparent)
- Equilibrium cancellation
- Self-censorship and preference falsification
- Empirical tests